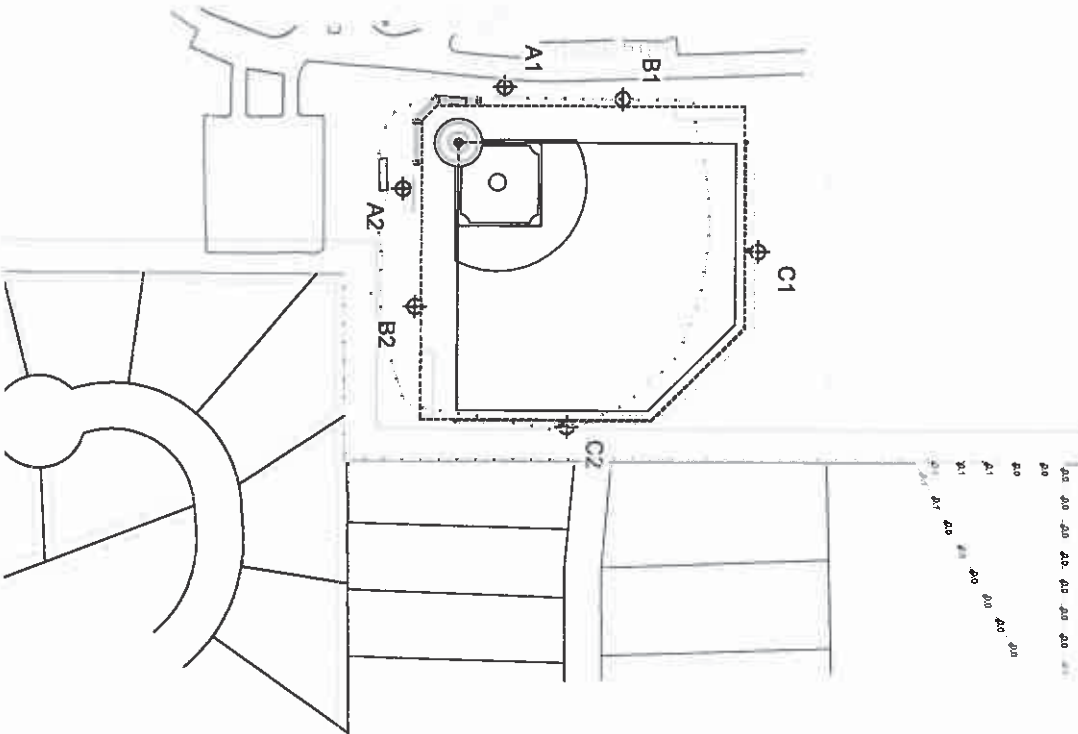


## EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	Pole		MOUNTING HEIGHT	Luminaire		QTY / POLE	THIS GRID	OTHER GRIDS
			GRADE ELEVATION	4'		LAMP TYPE	1500W MZ			
2	A1-A2	70'	4'	74'	84'	1500W MZ	16	13	7	0
1	B1	80'	4'	80'	80'	1500W MZ	16	12	4	3
1	B2	80'	-	70'	70'	1500W MZ	10	9	1	1
1	C1	70'	-	70'	70'	1500W MZ	10	8	2	2
1	C2	70'	-	70'	70'	1500W MZ	10	8	2	2
6	TOTALS						66	56	10	10



SCALE IN FEET 1 : 200



Pole location(s) ⬢ dimensions are relative to 0,0 reference point(s) ⊗

# 17SL-CC00078

**MUSCO**  
Lighting

## MY PROJECT

Name: Saint John Vianney High School Baseball  
Location: Saint Louis, MO

## GRID SUMMARY

Name: Parcel 1  
Spacing: 30.0'  
Height: -1.4' above grade

## CONSTANT ILLUMINATION

SUMMARY HORIZONTAL FOOTCANDLES

Entire Grid  
Scan Average: 0.038  
Maximum: 0.07  
Minimum: 0.02  
No. of Points: 21

## LUMINAIRE INFORMATION

Luminaire Type: Green Generation  
Design Usage Hours: 5,000 hours  
Design Lumens: 134,000  
Avg Lamp Tilt Factor: 1.000  
No. of Luminaires: 56  
Avg KW: 87.58 (95.2 max)

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

**Field Measurements:** Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EXHIBIT "14"

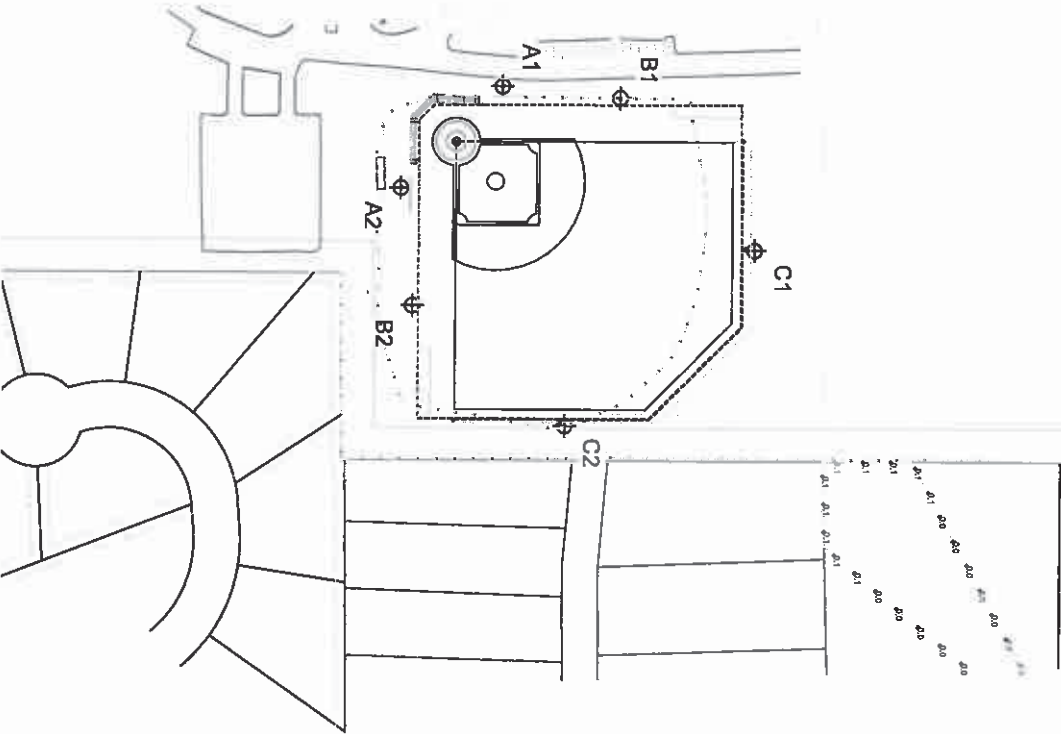
## ENGINEERED DESIGN

By: Justin Van Soelen  
File # / Date: 171842-D-prod-spill13 28-Nov-16

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN									
Pole		Luminaire		Lamp		Qty /		This	
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	TYPE	POLE	GRID	OTHER	GRIDS
2	A1-A2	70"	4'	74'	1500W MZ	7	7	0	0
1	B1	80"	4'	84'	1500W MZ	16	13	3	3
1	B2	80"	-	80'	1500W MZ	16	12	4	4
1	C1	70"	-	70'	1500W MZ	10	9	1	1
1	C2	70"	-	70'	1500W MZ	10	8	2	2
6	TOTALS					66	56	10	10



SCALE IN FEET 1 : 200

0' 200' 400'

Pole location(s) ⚡ dimensions are relative to 0,0 reference point(s) ⊗



**WV PROJECT**  
Name: Saint John Vianney High School Baseball  
Location: Saint Louis, MO

#### GRID SUMMARY

Name: Parcel 2  
Spacing: 30.0'  
Height: -0.8' above grade

#### CONSTANT ILLUMINATION

SUMMARY

Entire Grid

HORIZONTAL FOOTCANDLES

Scan Average: 0.056

Maximum: 0.13

Minimum: 0.02

No of Points: 22

#### LUMINAIRE INFORMATION

Luminaire Type: Green Generation

Design Usage Hours: 5,000 hours

Design Lumens: 134,000

Avg Lamp Tilt Factor: 1.000

No of Luminaires: 56

Avg KW: 87.58 (95.2 max)

#### Guaranteed Performance: The CONSTANT ILLUMINATION

described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

#### ENGINEERED DESIGN

By: Justin Van Soelen  
File # / Date: 171842-D-prod-splln3 28-Nov-16

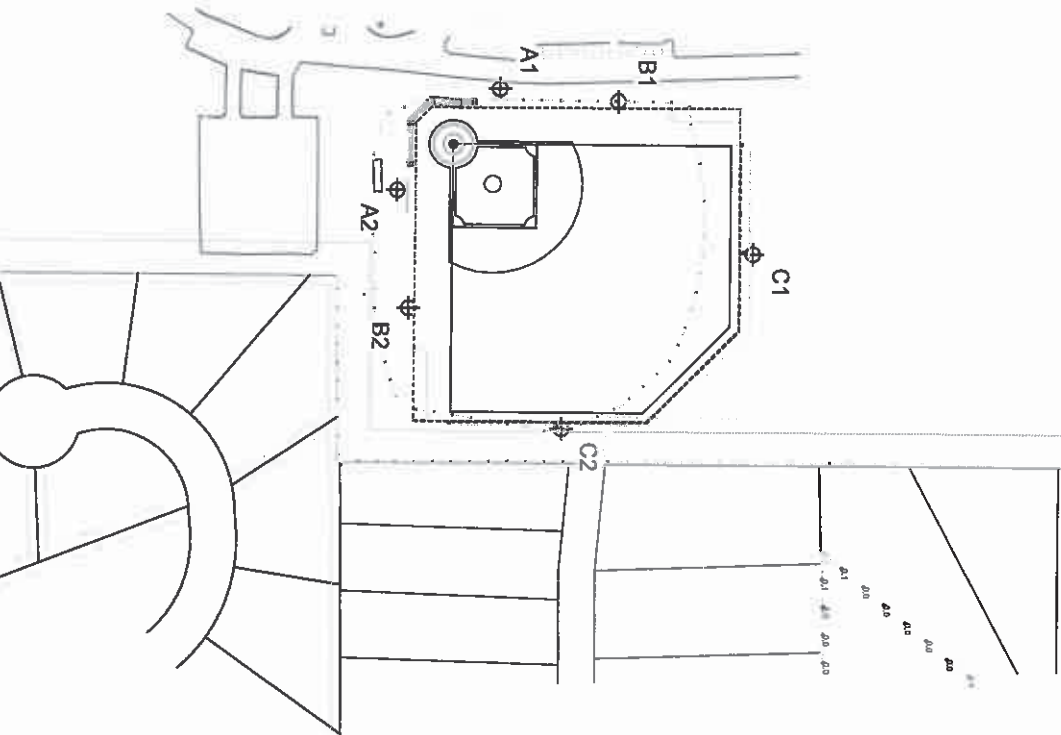
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#### ILLUMINATION SUMMARY

## EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	4'	74'	1500W MZ	7	7	0
1	B1	80'	4'	84'	1500W MZ	16	13	3
1	B2	80'	-	80'	1500W MZ	16	12	4
1	C1	70'	-	70'	1500W MZ	10	9	1
1	C2	70'	-	70'	1500W MZ	10	8	2
6	TOTALS					66	56	10

SCALE IN FEET 1 : 200



Pole location(s) Ⓢ dimensions are relative to 0,0 reference point(s) ⊗



## MY PROJECT

Name: Saint John Vianney High School Baseball  
Location: Saint Louis, MO

## GRID SUMMARY

Name: Parcel 3  
Spacing: 30.0'  
Height: -0.9' above grade

## CONSTANT ILLUMINATION

## SUMMARY

Entire Grid

HORIZONTAL FOOTCANDLES

Scan Average: 0.041

Maximum: 0.07

Minimum: 0.02

No of Points: 12

## LUMINAIRE INFORMATION

Luminaire Type: Green Generation

Design Usage Hours: 5,000 hours

Design Lumens: 134,000

Avg Lamp Tilt Factor: 1.000

No. of luminaires: 56

Avg KW: 87.58 (95.2 max)

## Guaranteed Performance: The CONSTANT ILLUMINATION

described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE USA. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Ampereage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

## ENGINEERED DESIGN

By: Justin Van Soelen  
File # / Date: 177842-D-prod-spliks3

28-Nov-16

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## ILLUMINATION SUMMARY

## EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE	ELEVATION	MOUNTING HEIGHT	Luminaires		
						LAMP TYPE	QTY / POLE	THIS GRID OTHER
2	A1-A2	70'	4'	74'	84'	1500W MZ	7	7 0
1	B1	80'	4'	84'	84'	1500W MZ	16	13 3
1	B2	80'	-	80'	80'	1500W MZ	16	12 4
1	C1	70'	-	70'	70'	1500W MZ	10	9 1
1	C2	70'	-	70'	70'	1500W MZ	10	8 2
6	TOTALS						66	56 10



## MUSCO PROJECT

Name: Saint John Vianney High School Baseball  
Location: Saint Louis, MO

## GRID SUMMARY

Name: Parcel 4  
Spacing: 30.0'  
Height: -0.3' above grade

## CONSTANT ILLUMINATION

SUMMARY: Entire Grid HORIZONTAL, FOOTCANDLES

Scan Average: 0.372

Maximum: 1.15

Minimum: 0.06

No. of Points: 15

## LUMINAIRE INFORMATION

Luminaire Type: Green Generation

Design Usage Hours: 5,000 hours

Design Lumens: 134,000

Avg Lamp Tilt Factor: 1.000

No. of Luminaires: 56

Avg KW: 87.58 (95.2 max)

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

**Field Measurements:** Illumination measured in accordance with IESNA RP 6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

## ENGINEERED DESIGN

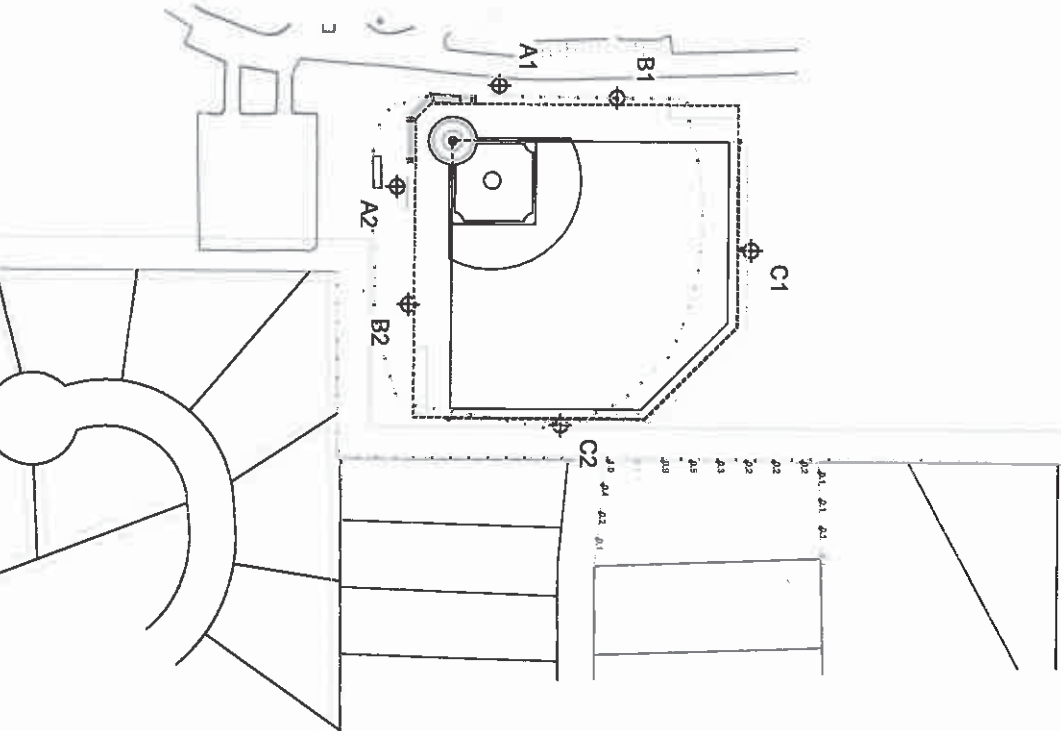
By: Justin Van Soelen  
File # / Date: 171842-D-Prod-spl1k3

28-Nov-16

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## ILLUMINATION SUMMARY

SCALE IN FEET 1 : 200



Pole location(s) ⦿ dimensions are relative to 0,0 reference point(s) ⊗

## EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE	ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70"	4"	74'	74'	1500W MZ	7	13	0
1	B1	80"	4"	80'	80'	1500W MZ	16	12	4
1	B2	80"	-	-	70'	1500W MZ	10	9	1
1	C1	70"	-	-	70'	1500W MZ	10	8	2
1	C2	70"	-	-	70'	1500W MZ	10	56	10
6	TOTALS						65	56	10



## MY PROJECT

Name: Saint John Vianney High School Baseball  
Location: Saint Louis, MO

## GRID SUMMARY

Name: Parcel 5  
Spacing: 30.0'  
Height: -1.9' above grade

## CONSTANT ILLUMINATION

## SUMMARY

Entire Grid

HORIZONTAL FOOTCANDLES

Scan Average: 0.071

Maximum: 0.09

Minimum: 0.04

No. of Points: 15

## LUMINAIRE INFORMATION

Luminaire Type: Green Generation

Design Usage Hours: 5,000 hours

Design Lumens: 134,000

Avg Lamp Tilt Factor: 1.000

No. of Luminaires: 56

Avg KW: 87.58 (95.2 max)

## Guaranteed Performance: The CONSTANT ILLUMINATION

described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE IGA. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

## ENGINEERED DESIGN

By: Justin Van Soelen

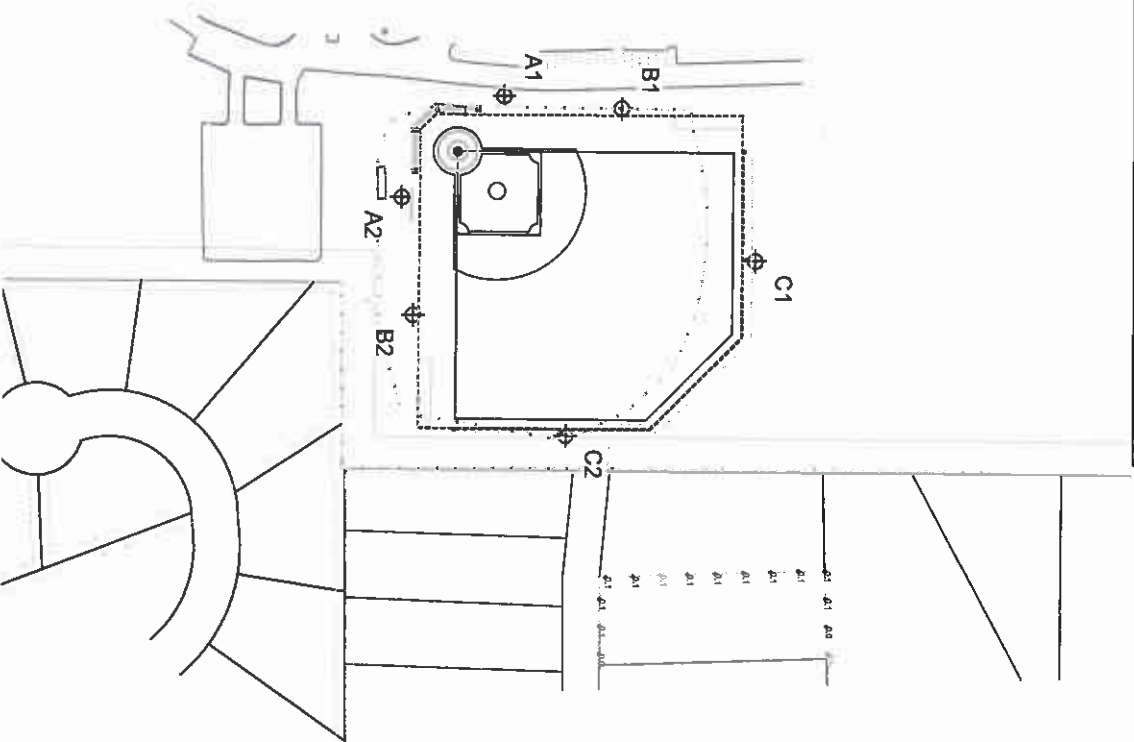
File # / Date: 171842-D-prod-splink3

28-Nov-16

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## ILLUMINATION SUMMARY

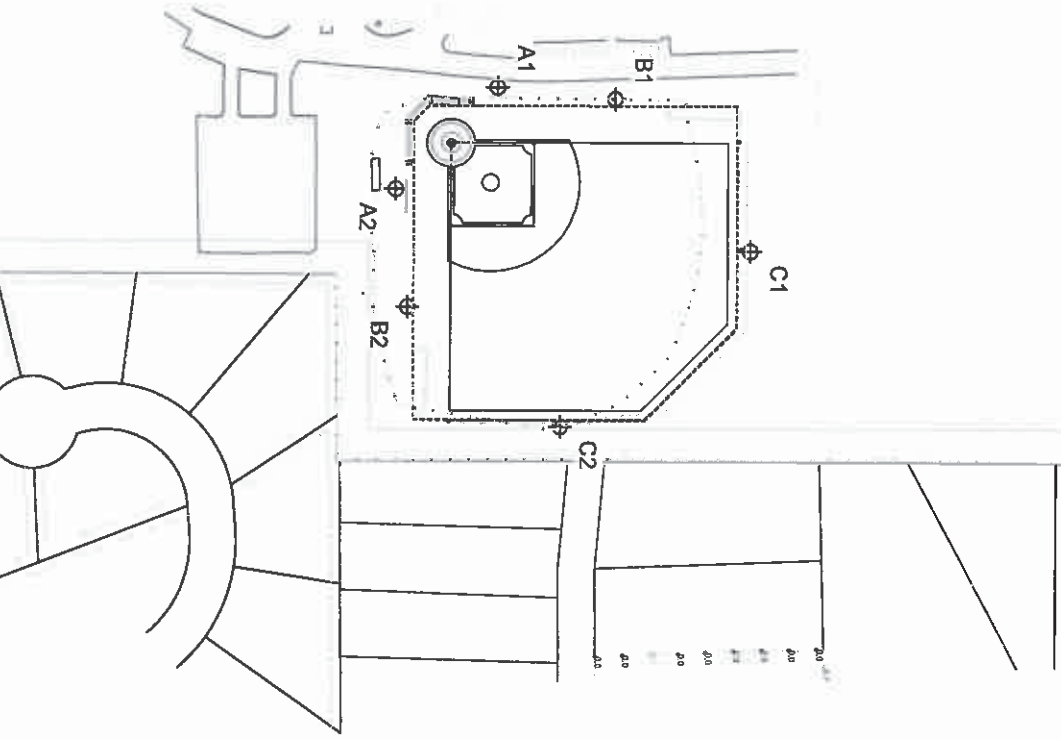
SCALE IN FEET 1 : 200



Pole location(s) ⚡ dimensions are relative to 0,0 reference point(s) ⊗



EQUIPMENT LIST FOR AREAS SHOWN									
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	Luminaires			
						QTY / POLE	THIS GRID	OTHER GRIDS	
2	A1-A2	70"	4'	74'	1500W MZ	7	7	0	
1	B1	80"	4'	84'	1500W MZ	16	13	3	
1	B2	80"	-	80'	1500W MZ	16	12	4	
1	C1	70"	-	70'	1500W MZ	10	9	1	
1	C2	70"	-	70'	1500W MZ	10	8	2	
6						66	56	10	
TOTALS									



SCALE IN FEET 1 : 200



Pole location(s) ⦿ dimensions are relative to 0.0 reference point(s) ⊗



**MY PROJECT**

Name: Saint John Vannoy High School Baseball  
Location: Saint Louis, MO

**GRID SUMMARY**

Name: Parcel 6  
Spacing: 30.0'  
Height: -1.9' above grade

**CONSTANT ILLUMINATION**

SUMMARY HORIZONTAL FOOTCANDIES

Scan Average: 0.042  
Maximum: 0.05  
Minimum: 0.03  
No. of Points: 10

**LUMINAIRE INFORMATION**

Luminaire Type: Green Generation  
Design Usage Hours: 5,000 hours  
Design Lumens: 134,000  
Avg Lamp Tilt Factor: 1.000  
No. of luminaires: 56  
Avg KW: 87.58 (95.2 max)

**Guaranteed Performance:** The **CONSTANT ILLUMINATION** described above is guaranteed for the design usage hours of the system.

**Field Measurements:** Illumination measured in accordance with IESNA RP-6-15 and CIBSE 154. Individual values may vary. See the Warranty document for details.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

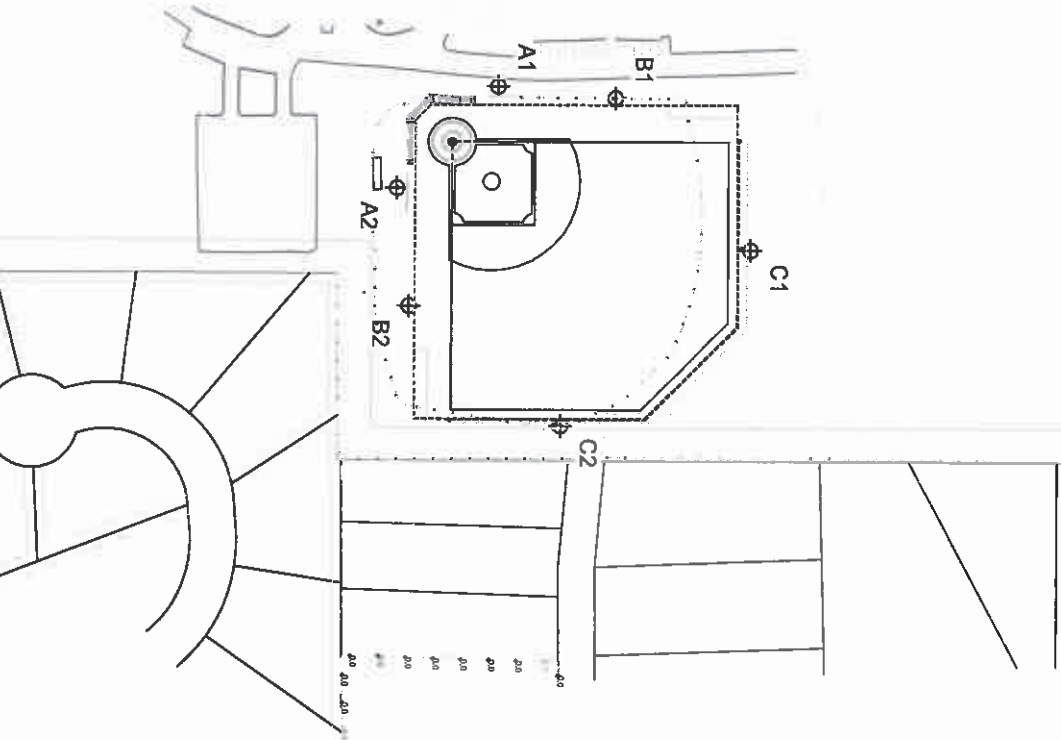
**ENGINEERED DESIGN**

By: Justin Van Soelen  
File # / Date: 171842-D-prod-spillR3 28-Nov-16

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**ILLUMINATION SUMMARY**

EQUIPMENT LIST OR AREAS SHOWN									
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	Luminaires				
					LAMP TYPE	QTY / POLE	THIS END	OTHER ENDS	
2	A1-A2	70"	4'	74'	1500W MZ	7	7	0	
1	B1	80"	4'	84'	1500W MZ	16	13	3	
1	B2	80"	-	80'	1500W MZ	16	17	4	
1	C1	70"	-	70'	1500W MZ	10	9	1	
1	C2	70"	-	70'	1500W MZ	10	8	2	
6	TOTALS					66	56	10	



SCALE IN FEET 1 : 200



Pole location(s) ⦿ dimensions are relative to 0.0 reference point(s) ⊗



#### MY PROJECT

Name: Saint John Vianney High School Baseball  
Location: Saint Louis, MO

#### GRID SUMMARY

Name: Parcel 7  
Spacing: 30.0'  
Height: -3.4' above grade

#### CONSTANT ILLUMINATION

SUMMARY HORIZONTAL FOOTCANDLES

Scan Average: 0.034  
Maximum: 0.04  
Minimum: 0.02  
No. of Points: 12

#### LUMINAIRE INFORMATION

Luminaire Type: Green Generation  
Design Usage Hours: 5,000 hours  
Design Lumens: 134,000  
Avg Lamp Tilt Factor: 1.000  
No. of luminaires: 56  
Avg KW: 87.58 (95.2 max)

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

**Field Measurements:** Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

#### ENGINEERED DESIGN

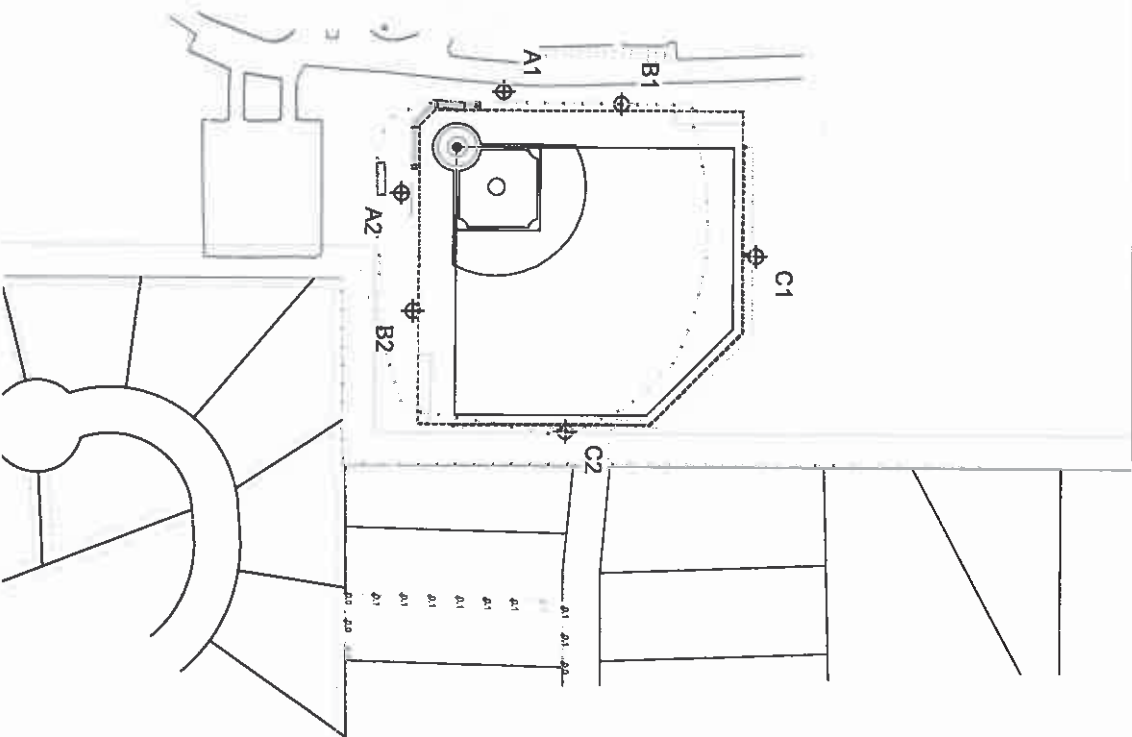
By: Justin Van Soelen  
File # / Date: 171842-D-prod-spillR3 28-Nov-16

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#### ILLUMINATION SUMMARY

## EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	LUMINAIRES		
						QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	4'	74'	1500W MZ	7	7	0
1	B1	80'	4'	84'	1500W MZ	16	13	3
1	B2	80'	-	80'	1500W MZ	16	12	4
1	C1	70'	-	70'	1500W MZ	10	9	1
1	C2	70'	-	70'	1500W MZ	10	8	2
6	TOTALS					66	56	10



SCALE IN FEET 1 : 200



## MY PROJECT

Name: Saint John Vianney High School Baseball  
Location: Saint Louis, MO

## GRID SUMMARY

Name: Parcel 8  
Spacing: 30.0'  
Height: -3.4' above grade

## CONSTANT ILLUMINATION

## SUMMARY

Entire Grid  
Scan Average: 0.056  
Maximum: 0.07  
Minimum: 0.03  
No. of Points: 13

## HORIZONTAL FOOTCANDLES

## LUMINAIRE INFORMATION

Luminaire Type: Green Generation  
Design Usage Hours: 5,000 hours  
Design Lumens: 134,000  
Avg Lamp Tilt Factor: 1.000  
No. of Luminaires: 56  
Avg KW: 87.58 (95.2 max)

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

**Field Measurements:** Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

## ENGINEERED DESIGN

By: Justin Van Soelen  
File # / Date: 171842-D-prod-spill3

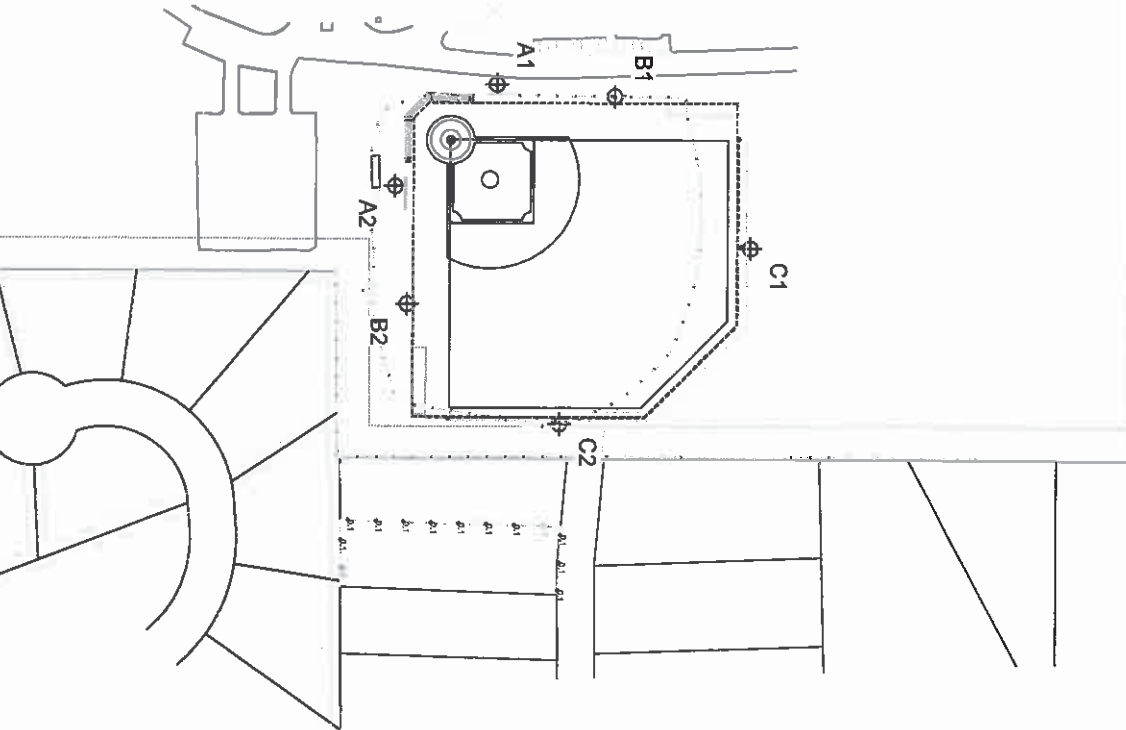
28-Nov-16

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## ILLUMINATION SUMMARY



EQUIPMENT LIST FOR AREAS SHOWN									
QTY	LOCATION	SIZE	GRADE	ELEVATION	Pole		Luminaires		
					HEIGHT	MOUNTING	LAMP TYPE	QTY / POLE	THIS GRID OTHER GRIDS
2	A1-A2	70'	4"	4'	74'		1500W MZ	7	7 0
1	B1	80'	4"	84'	80'		1500W MZ	16	13 3
1	B2	80'	-	-	80'		1500W MZ	16	12 4
1	C1	70'	-	-	70'		1500W MZ	10	9 1
1	C2	70'	-	-	70'		1500W MZ	10	8 2
6	TOTALS							66	56 10



SCALE IN FEET 1 200

Pole location(s) ⦿ dimensions are relative to 0,0 reference point(s) ⊗



**MUSCO PROJECT**

Name: Saint John Vianney High School Baseball  
Location: Saint Louis, MO

**GRID SUMMARY**

Name: Parcel 9  
Spacing: 30.0'  
Height: -2.6' above grade

**CONSTANT ILLUMINATION**

SUMMARY  
Entire Grid  
Scan Average: 0.099  
Maximum: 0.14  
Minimum: 0.05  
No. of Points: 13

**LUMINAIRE INFORMATION**

Luminaire Type: Green Generation  
Design Usage Hours: 5,000 hours  
Design Lumens: 134,000  
Avg Lamp Tilt Factor: 1.000  
No. of Luminaires: 56  
Avg KW: 87.58 (95.2 max)

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

**Field Measurements:** Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

**Electrical System Requirements:** Refer to Ampage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

**ENGINEERED DESIGN**

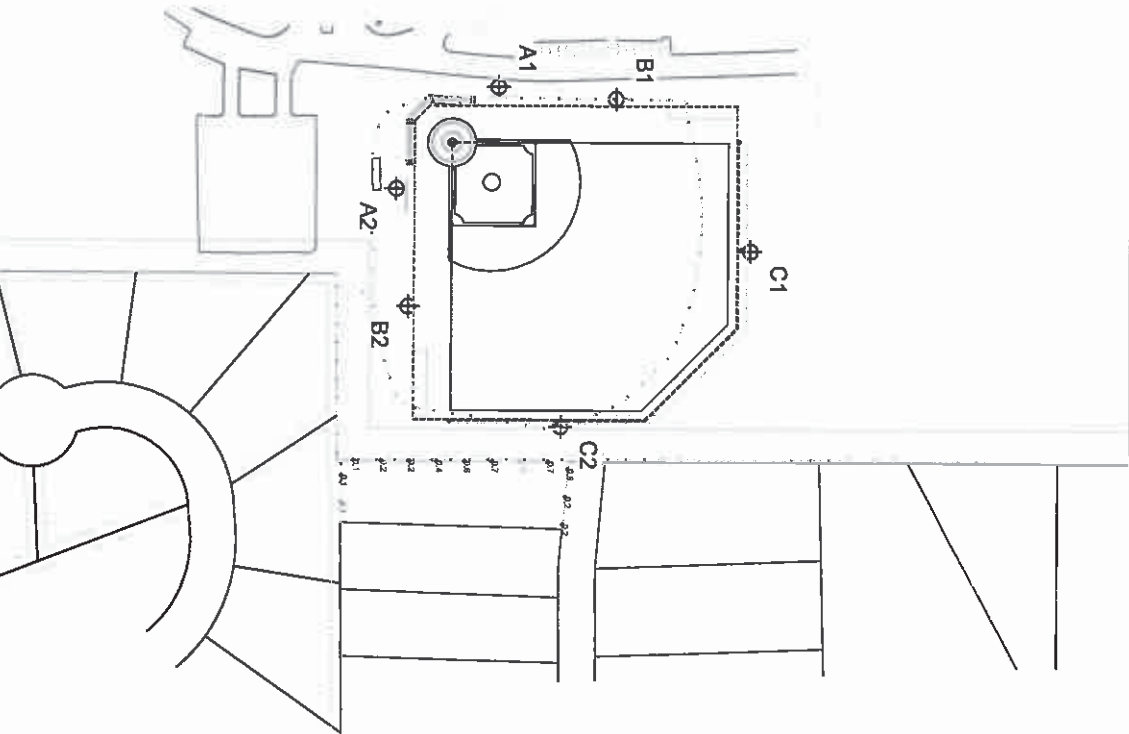
By: Justin Van Soelen  
File # / Date: 171842-D-prod-spill13 28-Nov-16

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**ILLUMINATION SUMMARY**

## EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE	ELEVATION	MOUNTING HEIGHT	LUMINAIRES		
						LAMP TYPE	QTY / POLE	THIS GRID OTHER GRIDS
2	A1-A2	70"	4"	74'	84'	1500W MZ	7	7 0
1	B1	80"	4"	-	80'	1500W MZ	16	13 3
1	B2	80"	-	-	80'	1500W MZ	16	12 4
1	C1	70"	-	-	70'	1500W MZ	10	9 1
1	C2	70"	-	-	70'	1500W MZ	10	8 2
6	TOTALS						66	56 10



SCALE IN FEET 1" = 200'



Pole location(s) Ⓢ dimensions are relative to 0.0 reference point(s) ⊗



## MY PROJECT

Name: Saint John Vannoy High School Baseball  
Location: Saint Louis, MO

## GRID SUMMARY

Name: Parcel 10  
Spacing: 30.0'  
Height: -2.6' above grade

## CONSTANT ILLUMINATION

SUMMARY

HORIZONTAL FOOT CANDLES

Scan Average: 0.369  
Maximum: 0.76

Minimum: 0.09  
No. of Points: 13

## LUMINAIRE INFORMATION

Luminaire Type: Green Generation  
Design Usage Hours: 5,000 hours  
Design Lumens: 134,000  
Avg Lamp Tilt Factor: 1.000  
No. of Luminaires: 56  
Avg KW: 87.58 (95.2 max)

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

**Field Measurements:** Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

## ENGINEERED DESIGN

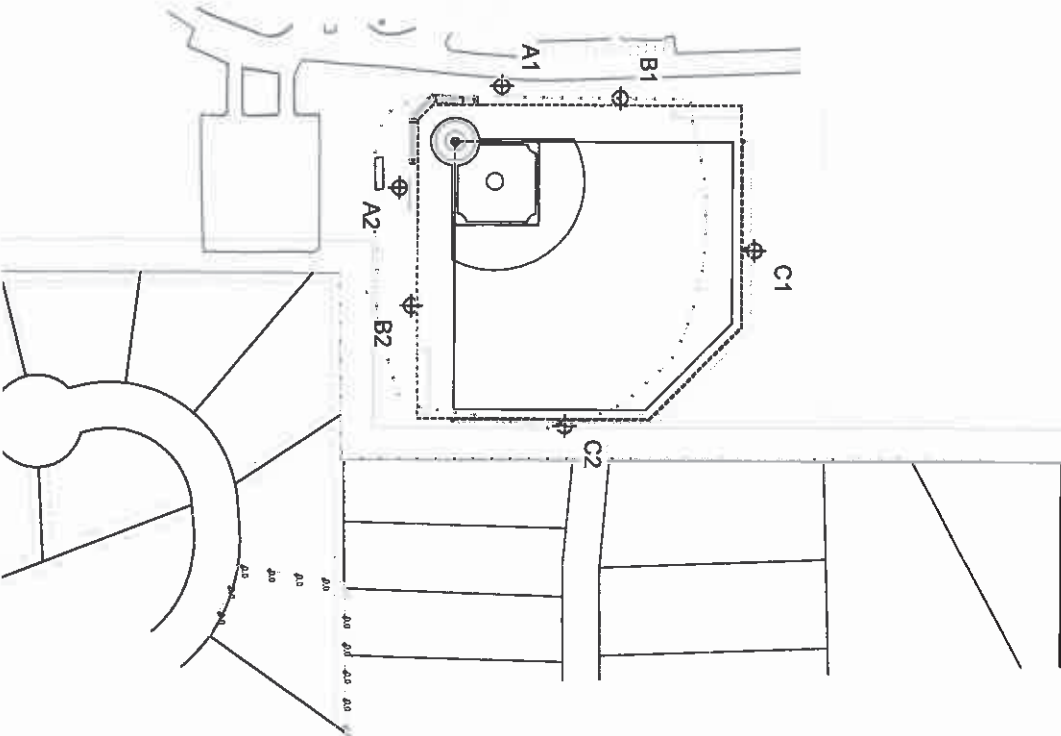
By: Justin Van Soelen  
File # / Date: 171842-D-prod-spills3 28-Nov-16

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## ILLUMINATION SUMMARY

## EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	Pole	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	Luminaires			
						Lamp Type	QTY / Pole	This Grid	Other Grids
2	A1-A2	70'	80"	4'	74'	1500W MZ	7	7	0
1	B1	80'	80"	-	84'	1500W MZ	16	13	3
1	B2	80'	80"	-	80'	1500W MZ	16	12	4
1	C1	70'	-	-	70'	1500W MZ	10	9	1
1	C2	70'	-	-	70'	1500W MZ	10	8	2
6	TOTALS						66	56	10



SCALE IN FEET 1 : 200



Pole location(s) ⬢ dimensions are relative to 0.0 reference point(s) ⊗



## MY PROJECT

Name: Saint John Vianney High School Baseball  
Location: Saint Louis, MO

## GRID SUMMARY

Name: Parcel 11  
Spacing: 30.0'  
Height: -6.9' above grade

## CONSTANT ILLUMINATION

## SUMMARY

Entire Grid

HORIZONTAL FOOTCANDLES

Scan Average: 0.034

Maximum: 0.05

Minimum: 0.02

No. of Points: 12

## LUMINAIRE INFORMATION

Luminaire Type: Green Generation

Design Usage Hours: 5,000 hours

Design Lumens: 134,000

Avg Lamp Tilt Factor: 1.000

No. of Luminaires: 56

Avg KW: 87.58 (95.2 max)

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

**Field Measurements:** Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

## ENGINEERED DESIGN

By: Justin Van Soelen

File # / Date: 177842-D-prod-spllr3

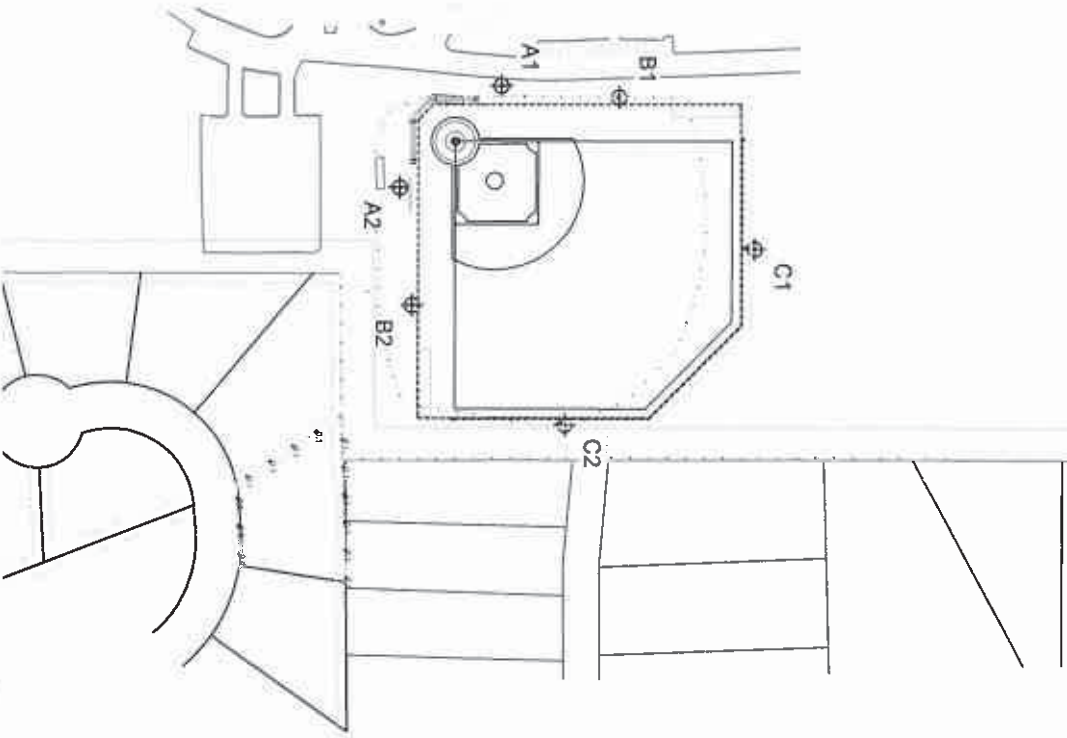
28-Nov-16

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## ILLUMINATION SUMMARY

## EQUIPMENT LIST FOR AREAS SHOWN

QTY	Pole		Luminaires		QTY / POLE	THIS GRID	OTHER GRIDS
	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT			
2	A1-A2	70'	4'	74'	7	13	3
1	B1	80'	-	84'	16	12	4
1	B2	80'	-	80'	16	9	1
1	C1	70'	-	70'	10	8	2
1	C2	70'	-	70'	10	56	10
6	TOTALS				66	56	10



SCALE IN FEET 1" = 200'

0' 200' 400'

Pole location(s) + dimensions are relative to 0.0 reference point(s)



## MY PROJECT

Name: Saint John Vianney High School Baseball  
Location: Saint Louis, MO

## GRID SUMMARY

Name: Parcel 12  
Spacing: 30.0'  
Height: -13.2' above grade

## CONSTANT ILLUMINATION

SUMMARY ENTIRE GRID HORIZONTAL FOOTCANDLES

Scan Average: 0.076  
Maximum: 0.14  
Minimum: 0.03  
No. of Points: 14

## LUMINAIRE INFORMATION

Luminaire Type: Green Generation  
Design Usage Hours: 5,000 hours  
Design Lumens: 134,000  
Avg Lamp Tilt Factor: 1.000  
No. of Luminaires: 56  
Avg KW: 87.58 (95.2 max)

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

**Field Measurements:** Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

## ENGINEERED DESIGN

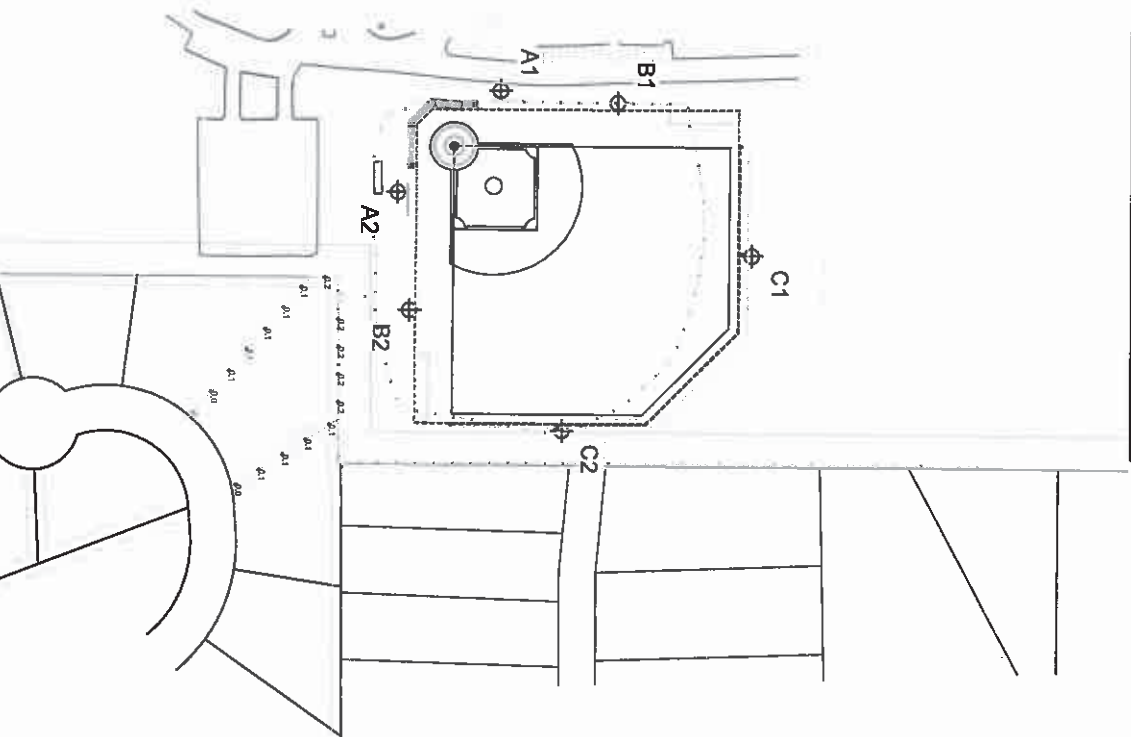
By: Justin Van Soelen  
File # / Date: 171842-D-prod-spllr3 28-Nov-16

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## ILLUMINATION SUMMARY

## EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	Lamp TYPE	Luminaires		
						QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	4'	74'	1500W MZ	7	7	0
1	B1	80'	4'	84'	1500W MZ	16	13	3
1	B2	80'	-	80'	1500W MZ	16	12	4
1	C1	70'	-	70'	1500W MZ	10	9	1
1	C2	70'	-	70'	1500W MZ	10	8	2
6	TOTALS					66	56	10



SCALE IN FEET 1 : 200



Pole location(s) ⬤ dimensions are relative to 0.0 reference point(s) ⊗



## VN PROJECT

Name: Saint John Vainney High School Baseball  
Location: Saint Louis, MO

## GRID SUMMARY

Name: Parcel 13  
Spacing: 30.0'  
Height: -19.9' above grade

## CONSTANT ILLUMINATION

SUMMARY

HORIZONTAL FOOT-CANDLES

Entire Grid  
Scan Average: 0.117  
Maximum: 0.23  
Minimum: 0.04  
No. of Points: 18

## LUMINAIRE INFORMATION

Luminaire Type: Green Generation  
Design Usage Hours: 5,000 hours  
Design Lumens: 134,000  
Avg Lamp Tilt Factor: 1.000  
No. of Luminaires: 56  
Avg KW: 87.58 (95.2 max)

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

**Field Measurements:** Illumination measured in accordance with IESNA RP-6-15 and CIBSE IGA. Individual values may vary. See the Warranty document for details.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

## ENGINEERED DESIGN

By: Justin Van Soelen  
File # / Date: 171842-D-prod-spl113

28-Nov-16

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## ILLUMINATION SUMMARY

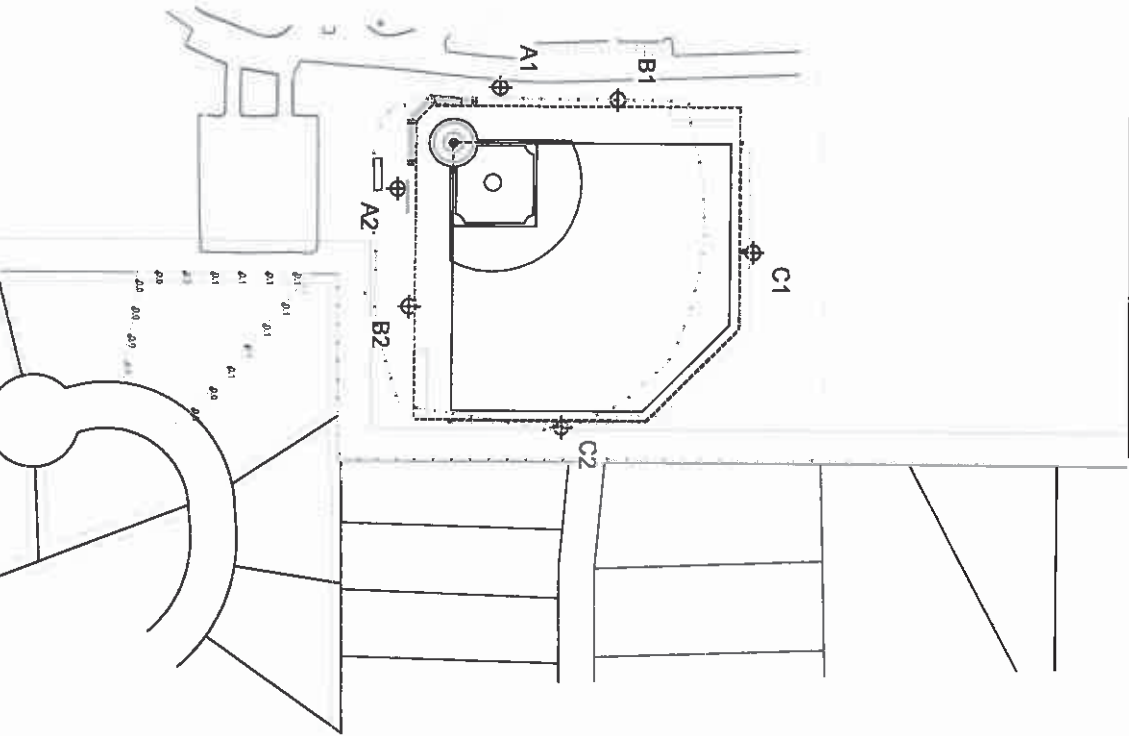


## EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	Luminaires		
						QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70"	4"	74'	1500W MZ	7	7	0
1	B1	80"	4"	84'	1500W MZ	16	13	3
1	B2	80"	-	80'	1500W MZ	16	12	4
1	C1	70"	-	70'	1500W MZ	10	9	1
1	C2	70"	-	70'	1500W MZ	10	8	2
6	TOTALS					66	56	10

SCALE IN FEET 1" = 200'

0' 200' 400'



Pole location(s) ⬢ dimensions are relative to 0,0 reference point(s) ⊗



## MVP PROJECT

Name: Saint John Vianney High School Baseball  
Location: Saint Louis, MO

## GRID SUMMARY

Name: Parcel 14  
Spacing: 30.0'  
Height: -16.4' above grade

## CONSTANT ILLUMINATION

## SUMMARY

Entire Grid

HORIZONTAL FOOTCANDLES

Scan Average:

0.066

Maximum

0.14

Minimum

0.03

No. of Points

17

## LUMINAIRE INFORMATION

Luminaire Type: Green Generation

Design Usage Hours: 5,000 hours

Design Lumens: 134,000

Avg Lamp Tilt Factor: 1.000

No. of Luminaires: 56

Avg KW: 87.58 (95.2 max)

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

**Field Measurements:** Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

## ENGINEERED DESIGN

By: Justin Van Soelen  
File # / Date: 171842-D-prod-spills3

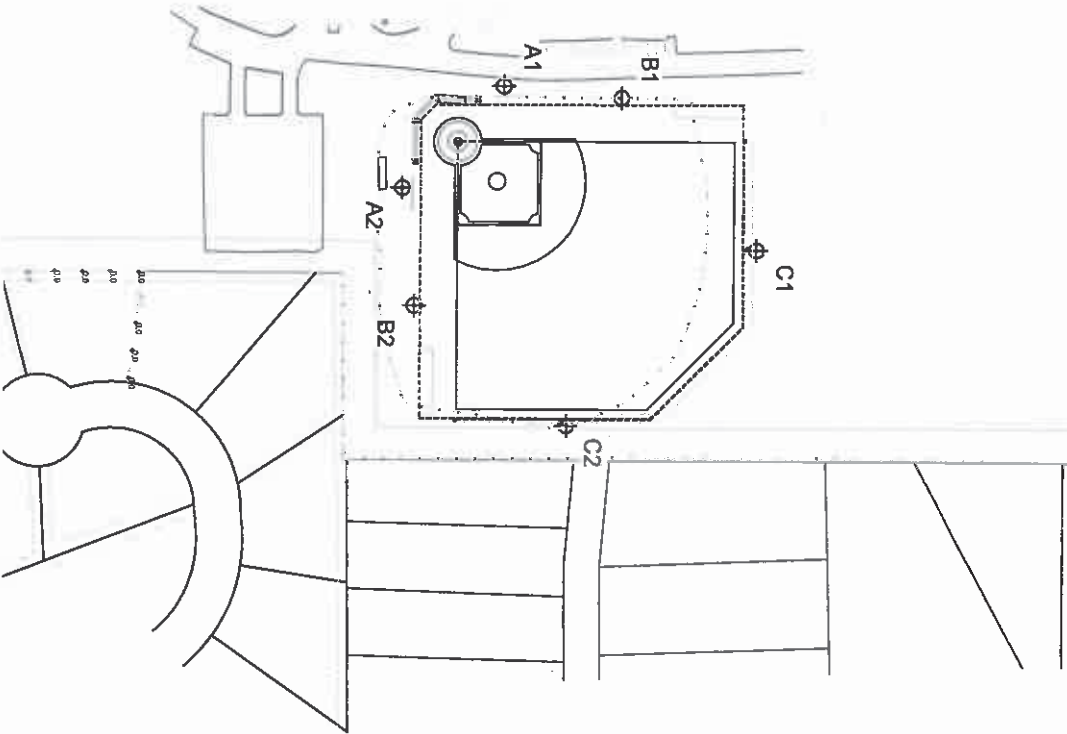
28-Nov-16

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## ILLUMINATION SUMMARY

## EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	Luminaire				THIS OTHER
					LAMP TYPE	QTY / POLE	GRD	GRDS	
2	A1-A2	70"	4'	74'	1500W MZ	7	7	0	
1	B1	80"	4'	84'	1500W MZ	16	13	3	
1	B2	80"	-	80'	1500W MZ	16	12	4	
1	C1	70"	-	70'	1500W MZ	10	9	1	
1	C2	70"	-	70'	1500W MZ	10	8	2	
6						66	56	10	



SCALE IN FEET 1 : 200



Pole location(s) ◆ dimensions are relative to 0.0 reference point(s) ⊗



## MY PROJECT

Name: Saint John Vannoy High School Baseball  
Location: Saint Louis, MO

## GRID SUMMARY

Name: Parcel 15  
Spacing: 30.0'  
Height: -14.9' above grade

## CONSTANT ILLUMINATION

SUMMARY

Entire Grid

HORIZONTAL FOOT CANDLES

Scan Average: 0.026

Maximum: 0.03

Minimum: 0.02

No. of Points: 9

## LUMINAIRE INFORMATION

Luminaire Type: Green Generation

Design Usage Hours: 5,000 hours

Design Lumens: 134,000

Avg Lamp Tilt Factor: 1.000

No. of Luminaires: 56

Avg KW: 87.58 (95.2 max)

## Guaranteed Performance: The CONSTANT ILLUMINATION

described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

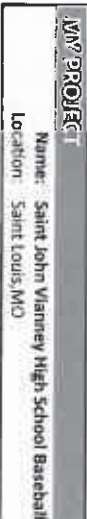
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

## ENGINEERED DESIGN

By: Justin Van Soelen  
File # / Date: 171842-D-prod-spllr3 28-Nov-16

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## ILLUMINATION SUMMARY



**INCLUDES:**

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOULTING HEIGHT	Luminares	
					TYPE	QTY
2	A1-A2	70'	4'	74'	1500W MZ	7
1	B1	80'	4'	84'	1500W MZ	16
1	B2	80'	-	80'	1500W MZ	16
2	C1-C2	70'	-	70'	1500W MZ	10
6	TOTALS					66

SINGLE LUMINAIRE AMPERAGE/DRAW CHART		Line Amperage Per Luminaire (times draw)	
Ballast Specifications (50 mm power factor)	Single Phase Voltage	Z08	240
		(vol)	(vol)
1500 watt MZ		220	347
		(vol)	(vol)
		8.6	8.3
		7.5	6.5
		5.1	4.7
		3.7	



0' 100' 200'

Pole location(s)  $\oplus$  dimensions are relative to 0,0 reference point(s)  $\otimes$

## ENGINEERED DESIGN

**By: Justin Van Soelen**

File # / Date: 171842-D-prod-spillR3

28-Nov-16

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## EQUIPMENT LAYOUT